

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims:

Claim 1 (currently amended): A chloride selective electrode membrane comprising a polymeric matrix wherein said matrix comprises:

an epoxy resin curable by an amine agent; and

an amine curing agent selected from the group consisting of polyamides, amidoamines and mixtures thereof, wherein said amine curing agent is present in stoichiometric excess over the amount required for complete curing of the epoxy resin.

Claim 2 (currently amended): A chloride selective electrode membrane according to claim 1, wherein said amine curing agent is a polyamide.

Claim 3 (previously presented): A chloride selective electrode membrane according to claim 2 wherein said polyamide is prepared by reacting an acid component and a polyalkylene polyamine component, said acid component comprising an unsaturated fatty acid dimer.

Claim 4 (previously presented): A chloride selective electrode membrane according to claim 3 wherein said unsaturated fatty acid dimer comprises a polyunsaturated fatty acid dimer.

Claim 5 (previously presented): A chloride selective electrode membrane according to claim 4 further comprising a monounsaturated fatty acid dimer.

Claim 6 (previously presented): A chloride selective electrode membrane according to claim 4 wherein said polyunsaturated fatty acid dimer is a C18 polyunsaturated fatty acid dimer.

Claim 7 (original): A chloride selective electrode membrane according to claim 5 wherein said monounsaturated fatty acid dimer is oleic acid dimer.

Claim 8 (previously presented): A chloride selective electrode membrane according to claim 3 wherein said unsaturated fatty acid dimer is a dimerized fatty acid from an oil selected from tall oil, castor oil, linseed oil, soybean oil and mixtures thereof.

Claim 9 (original): A chloride selective electrode membrane according to claim 3 wherein said polyalkylene polyamine component is selected from the group consisting of diethylene triamine, triethylene tetramine and tetraethylene pentamine, and mixtures thereof.

Claim 10 (original): A chloride selective electrode membrane according to claim 1 wherein said polymer matrix further comprises an adhesion promoter selected from the group consisting of clays, silicas, silicates and mixtures thereof.

Claim 11 (previously presented): A chloride selective electrode membrane according to claim 1, wherein said epoxy resin is prepared by reacting bisphenol A and epichlorohydrin.

Claim 12 (currently amended): A chloride selective electrode membrane according to claim 1 wherein the amount of said amine curing agent is present in a stoichiometric excess of at least 150%.

Claim 13 (currently amended): A chloride selective electrode membrane according to claim 1 wherein said amine curing agent is an amidoamine.

Claim 14 (previously presented): A chloride selective electrode membrane according to claim 13 wherein said amidoamine is prepared by reacting an acid component and an amine component, said acid component comprising monomeric saturated and unsaturated fatty acids.

Claim 15 (previously presented): A chloride selective electrode membrane according to claim 14 wherein said amine component is selected from the group consisting of alkylene diamines and polyalkylene polyamines and mixtures thereof.

Claim 16 (currently amended): A chloride selective electrode which comprises a chloride selective electrode membrane comprising a polymeric matrix, wherein said matrix comprises:

an epoxy resin curable by an amine agent; and

an amine curing agent selected from the group consisting of polyamides, amidoamines and mixtures thereof wherein said amine curing agent is present in stoichiometric excess over the amount required for complete curing of the epoxy resin.

Claim 17 (previously presented): A system for measuring chloride ion in a fluid, said system comprising: a chloride selective electrode according to claim 16 a reference electrode; and means for measuring the electromotive force between said chloride selective electrode and said reference electrode.

Claim 18 (currently amended): A sensor assembly for determining chloride ion in a test liquid, comprising:

an electrically insulated substrate having a surface with a reference electrode and

a chloride selective electrode formed thereon, wherein the chloride selective electrode

comprises:

a chloride selective electrode membrane comprising a polymeric matrix wherein

said matrix comprises:

an epoxy resin curable by an amine agent; and

an amine curing agent selected from the group consisting of polyamide, amidoamines and mixtures thereof, wherein said amine curing agent is present in stoichiometric excess over the amount required for complete curing of the epoxy resin;

means positioned on the surface of the substrate defining a reference flow channel and a sensor flow channel;
said reference flow channel having means for passing reference liquids over the reference electrode; said sensor flow channel having means for passing test liquid over the sensor electrode; and said reference and sensor flow channels defining a common outlet for removing liquids from the assembly.

Claim 19 (currently amended): A chloride selective electrode membrane according to claim 16 wherein

said amine curing agent is present in a stoichiometric excess of at least 150%.

Claim 20 (original): A method of applying the chloride selective membrane material of claim 19 to an inert substrate, said method comprising:

dispensing said material to onto said substrate; and

heating the substrate containing dispensed chloride selective material to obtain chloride selective membrane.

Claim 21 (original): A method of applying the chloride selective membrane material of claim 1 to an inert substrate, said method comprising:

dispensing said material to onto said substrate; and

heating the substrate containing dispensed chloride selective material to obtain chloride selective membrane.